

May 22, 2015

BY HAND DELIVERY AND ELECTRONIC MAIL

Luly E. Massaro, Commission Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

**RE: Docket 4473 - Electric Infrastructure, Safety, and Reliability Plan
Quarterly Update – Fourth Quarter Ending March 31, 2014**

Dear Ms. Massaro:

On behalf of National Grid¹, I have enclosed for filing in the above-referenced docket, ten (10) copies of the Company's fiscal year (FY) 2015 Electric Infrastructure, Safety, and Reliability (ISR) Plan quarterly update for the fourth quarter ending March 31, 2014. Pursuant to the provisions of the approved FY 2015 Electric ISR Plan, the Company committed to providing quarterly updates on the progress of its Electric ISR program to the Rhode Island Public Utilities Commission and the Rhode Island Division of Public Utilities and Carriers.

Thank you for your attention to this matter. If you have any questions, please contact me at 781-907-2121.

Very truly yours,



Raquel J. Webster

Enclosure

cc: Leo Wold, Esq.
Steve Scialabba
James Lanni
Al Contente

¹ The Narragansett Electric Company d/b/a National Grid (National Grid or the Company).

Certificate of Service

I hereby certify that a copy of the cover letter and any materials accompanying this certificate was electronically transmitted to the individuals listed below.

Paper copies of this filing are being hand delivered to the Rhode Island Public Utilities Commission and to the Rhode Island Division of Public Utilities and Carriers.



Joanne M. Scanlon

May 22, 2015

Date

Docket No. 4473 National Grid's FY 2015 Electric Infrastructure, Safety and Reliability Plan - Service List as of 10/30/14

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Electric Infrastructure, Safety, and Reliability Plan

FY2015 Quarterly Update

Fourth Quarter Ending March 31, 2015

Executive Summary

Through the fourth quarter of fiscal year 2015 (FY 2015), the Company¹ spent \$72.8 million for capital investment projects against a budget of \$65.9 million. Capital spending for FY 2015 was \$6.9 million over-budget. This above budget spending variance was primarily driven by capital spending in the Discretionary Sub-category, which was above budget by \$10.4 million. This was primarily due to over-budget spending in the Asset Condition (\$5.6 million over-budget) and System Capacity & Performance (\$3.9 million over-budget) categories. At the same time, spending in the Non-Discretionary Sub-category was under-budget by \$3.5 million, which was comprised of an over spending of \$3.3 million in the Customer Request/Public Requirements category and an under spend of \$6.8 million in the Damage/Failure category. Each of these categories is addressed in more detail below.

FY 2015 Capital Spending by Key Driver Category

Non-Discretionary Spending

Customer Request/Public Requirement - \$3.3 million over-budget for the fiscal year.

Spending for FY 2015 in the Customer Request/Public Requirement category (*previously called the Statutory/Regulatory category*) was \$3.3 million over-budget, which was driven primarily by the projects below:

- Capital spending for FY 2015 on the new Shun Pike Substation project was approximately \$1.3 million over-budget. Although this project was completed in

¹ The Narragansett Electric Company d/b/a National Grid (National Grid or the Company).

FY 2014, charges were reclassified between an associated transmission project and two distribution projects during the closeout process in FY 2015.

- Capital spending for FY 2015 on the I-195 Relocation projects for Contracts 14 and 15 was approximately \$1.2 million over-budget due to the identification of undocumented third-party utilities assets that required relocation of the manhole and duct system from the original designed layout. This work also resulted in the need for additional contaminated soil displacement. Additional construction labor hours were also required to meet changes to the State contractor's schedule.
- Capital spending for FY 2015 on phase two of the Watch Hill Underground project was \$0.8 million over-budget. This was due to construction occurring in FY 2015. The Company received the customer contribution in the prior fiscal year.
- Capital spending for FY 2015 on the Ocean State New Business Residential blanket was \$0.8 million over-budget due to higher demand and costs to date.

Among the major projects in this category offsetting these over-spending projects was the following under-budget project:

- The meter and transformer purchase blankets were \$2.4 million under-budget due to the timing of scheduled deliveries and payments between FY 2015 and FY 2016.

Damage/Failure - \$6.8 million under-budget for the fiscal year.

Spending for FY 2015 in the Damage/Failure category was \$6.8 million under-budget. This variance was primarily driven by the projects below:

- The Ocean State Storm Capital Confirming project was approximately \$10.2 million under-budget. During the third quarter, an adjustment associated with the Company's storm reconciliation filing, which was made to true-up storm-related capital costs to actual installed units, reclassified \$6.2 million from Capital to Operation and Maintenance (O&M) expense. In addition, the Company received a \$2.6 million credit that was associated with an insurance claim for a 2012 Rhode Island Flood.

- There was an increased spend in the identification and replacement of assets by Operations in the Ocean State Damage/Failure blankets for line and substations. Spending for FY 2015 on these blankets was a combined \$2.4 million over-budget.
- Projects for equipment failures at the Sockanosett, Nasonville, Warwick Mall, and Franklin Square substations contributed to \$2.1 million in capital spend. This spend exceeded the funded Damage/Failure reserve of \$1 million for a net spend of \$1.1M over budget

Finally, as noted above and shown in Attachment A, the total Non-Discretionary category had a fiscal year capital spending variance of \$3.5 million under-budget.

Discretionary Spending

Asset Condition - \$5.5 million over-budget for the fiscal year.

For FY 2015, capital spending for the Asset Condition category was \$5.6 million over-budget primarily due the following projects:

- The Asset Replacement budget contained a year end allowance of \$4.6 million for schedule delays, which did not fully materialize. Projects were selected for deferral, such as Underground Residential Development (URD) Replacement (\$0.8 million under-budget) and Metal-Clad switchgear retirement (\$1.7 million under-budget), to account for the allowance. However, the reductions required to offset the entire \$4.6 million allowance were not fully realized.
- Capital spending for FY 2015 on the DxT Relay Replacement strategy was \$1.3 million over-budget. The Company advanced the purchase of replacement equipment as the remaining obsolete electro-mechanical and solid state relays were no longer supported by the manufacturer and had limited availability of spare parts. This replacement alleviates prolonged outages that negatively impact transmission system stability and damage equipment.
- Capital spending for FY 2015 on the Eldred Substation project was \$1.0 million over-budget. The original budget estimate for this project was based on a preliminary engineering estimate, which accounted for the installation of a single

substation transformer. The project was ultimately designed for two transformers, which resulted in a cost increase when final engineering was completed.

- Capital spending for FY 2015 on the Governor St, Providence Ductline project was \$1.1 million over-budget. In FY 2014, productivity loss associated with restricted working locations and schedules as the result of public concerns raised during construction in this high profile area, as well as a conflict with the City sewer project, resulted in the project being delayed from FY 2014 into FY 2015.

Non-Infrastructure – \$0.9 million over-budget for the fiscal year.

For FY 2015, the Non-Infrastructure category capital spending was \$0.9 million over-budget. Of this total, \$0.5 million of the over-budget variance was driven by the FY 2015 reclassification of a net credit of capital accounting adjustments from Non-Infrastructure to an allocated population of Damage/Failure construction work orders. These net accounting adjustments had been temporarily accrued to Non-Infrastructure in FY 2014, and represented high level entries to correctly state capital, cost of removal and O&M labor on Damage/Failure work orders. The remaining \$0.4 million over-budget variance was due to purchases of transformer testing devices and general equipment.

System Capacity and Performance - \$3.9 million over-budget for the fiscal year.

Overall, capital spending for FY 2015 for the System Capacity and Performance category was \$3.9 million over-budget. This was primarily driven by the following projects:

- The System Capacity and Performance category contained a fiscal year-end allowance of \$5.2 million for schedule delays, which did not fully materialize. Several projects, such as the New London substation, were selected for deferral to account for the allowance. However, the reductions required to offset the entire \$5.2 million allowance were not fully realized.
- Capital spending in FY 2015 for the New Highland Drive Substation project was \$2.8 million over-budget. The variance was driven by use of conceptual estimates when the FY 2015 ISR budget was established. This forecast was updated as project grade estimates were developed when detailed engineering was completed.

- Capital spending in FY 2015 for the Volt/Var pilot program was \$0.8 million over-budget. This project was over-budget due to the required funding for Information Systems support, which was not accounted for in the budget, as well as higher than expected costs for design and materials.
- Capital spending in FY 2015 for the Pawtucket #1 Load Relief project was \$0.7 million over-budget. This emergent project was identified to address summer capacity constraints at the Pawtucket #1 substation.

Among the major projects in this category offsetting these over-spending projects were the following under-budget projects:

- The scope of the Chase Hill projects has been reduced from installing eight distribution feeders to installing four distribution feeders due to greater than anticipated distribution line costs and right-of-way construction and maintenance challenges. Consequently, the Chase Hill project had a year-end variance of \$5.6 million under-budget.
- Capital spending in FY 2015 for the Newport Substation project was \$1.6 million under-budget. This variance was due to the fact that this project is still in the permitting and engineering phases, and construction is now expected to begin in FY 2017.
- Capital spending in FY 2015 for the New London Ave substation was \$1.5 million under-budget. This project was selected for deferral to manage the overall discretionary portfolio to budget.
- Capital spending in FY 2015 for the projects associated with the Kilvert substation was \$0.9 million under-budget. This project experienced delays due to the impact of the TF Green airport expansion project on the line construction scope.

Finally, as noted above and as shown in Attachment A, the total Discretionary category had a year-to-date capital spending variance of \$10.4 million over-budget.

The year-end spend is approximately \$6.7 million greater than the forecast reported in the third quarter. A portion of the variance is due to adjustments totaling \$4.1 million that

were transacted in the fourth quarter and not forecasted when the third quarter report was submitted. The adjustments were predominately due to corrections applied to the storm reconciliation adjustment and insurance receivable ledger entries, as well as a correction for materials erroneously charged to the gas segment in FY 2015. The remaining portion of the variance was due to numerous projects in both the Discretionary and Non-discretionary portfolios.

In Docket No. 4473, the Rhode Island Public Utilities Commission (PUC) ordered the Company to include in the FY 2016 Electric ISR Plan filing a proposal to identify and report in quarterly and annual reconciliation filings the projects that exceeded or were under the fiscal year-to-date and fiscal year-end budgets by ten percent (10%).² For the identified projects, the Company would note whether variances were due to the project being accelerated or delayed or whether the variances were due to an increase or decrease in total project cost. The Company agreed to provide in the quarterly reports explanations for the portfolio of large projects³ with variances exceeding \$0.1 million. These projects represent approximately \$22.5 million for the FY 2015 budget. The information is shown in Attachment E.

Investment Placed in Service

For FY 2015, \$76.7 million was placed in service. The Non-Discretionary Sub-category was \$3.3 million under the FY 2015 Electric ISR Plan planned amount, primarily due to the storm reconciliation adjustments and the insurance credits in the damage/failure category. The Discretionary Sub-category was \$11.0 million over the FY 2015 Electric ISR Plan planned amount, which was driven by large, multi-year projects being placed into service such as the New Highland Drive and Eldred substation projects. Overall, the plant-in-service of \$76.7 million is \$7.7 million over the FY 2015 Electric ISR Plan planned amount of \$68.9 million. Details by spending rationale are included in Attachment B.

² Docket No. 4473 Order at p. 25.

³ Large projects are defined as exceeding \$1 million in total project cost.

Vegetation Management

For FY 2015, the Company completed 100% of its annual distribution mileage cycle pruning goal of 1,168 miles. This represented an associated spending of 117% of the FY 2015 budget for the cycle pruning program. As previously noted in earlier FY 2015 Quarterly Reports, the costs for this program typically lag behind the work performed. The variance is driven by cycle pruning bids, which were significantly higher than previous years. Also, to maintain safe and reliable service and complete hourly pruning work, the Company re-prioritized some Sub-Transmission and Core Crew work. The Company's police detail costs were in line with what was expected for the year.

Inspection and Maintenance (I&M)

For FY 2015, the Company completed 100% of its annual structure inspection goal of 56,542. For FY 2015, 68% of the total I&M budget was spent with an associated spending of \$2.0 million. Fewer O&M repairs were required than expected, resulting in an under spend on the capital related opex and repair categories. The Long Range Plan had a FY 2015 budget of \$250k, with an associated spend of only \$11k. This is due to National Grid progressing study work under its Preliminary Service and Investigation ("PS&I") funding. Study efforts to summarize issues are generally considered O&M costs, while those study efforts to analyze alternatives and develop solutions are considered capital costs. As a result, the O&M budget was reduced in FY 2016 to cover the expected issue identification efforts.

Also included in the total costs is the FY 2015 mobile elevated voltage testing, which the PUC approved in Docket No. 4237. Attachment D provides the FY 2015 spending for all components in this category.

The Company began performing inspections on its overhead distribution system in FY 2011, and, in FY 2012 began performing the repairs based on those inspections. The Company categorizes the deficiencies found as Level I, II, or III, and repairs Level I deficiencies either immediately or within approximately one week of the inspection. The Company bundles Level II and III work for planned replacement. At this time, the Company has completed repairs reported for approximately 29% of the deficiencies found. Total deficiencies found and repairs made to date are shown in the table below.

Summary of Deficiencies and Repair Activities				
RI Distribution				
Year Inspection Performed	Priority Level/Repair Expected	Deficiencies Found (Total)	Repaired as of 03/31/15	Not Repaired as of 03/31/15
FY 2011	I	19	19	0
	II	13,147	12,589	558
	III	38	9	29
FY 2012	I	20	20	0
	II	15,870	14,634	1,236
	III	667	455	212
FY 2013	I	17	17	0
	II	26,885	5,570	21,315
	III	8,129	1,064	7,065
FY 2014	I	11	11	0
	II	23,196	980	22,216
	III	8,776	316	8,460
FY 2015	I	5	5	0
	II	21,554	4	21,550
	III	4,395	2	4,393
Total Since Program Inception	I, II, III	122,729	35,695	87,034

As shown in the table below, results of the Company's manual elevated voltage testing for FY 2015 have not indicated any instances of elevated voltages found through either overhead or manual elevated voltage inspections.

Manual Elevated Voltage Testing					
	Total System Units Requiring Testing	FY 2015 Units Completed thru 03-31-15	Percent Completed	Units with Voltage Found (>1.0v)	Percent of Units Tested with Voltage (>1.0v)
Distribution Facilities	285,315	55,755	19.54%	0	0%
Underground Facilities	13,870	2,850	20.55%	0	0%
Street Lights	5,888	2,874	48.81%	0	0%

*Rhode Island Street Light Elevated Voltage Testing Program moved from a five-year to a three-year program. The Company achieved a 100% completion rate in FY 2014. The new three-year cycle begins again in FY 2015.

Attachment A

US Electricity Distribution - Rhode Island
Capital Spend by Spending Rationale
FY 2015
(\$000)

	FY 2015 Total		
	Budget	Actual	Variance
Customer Request/Public Requirement	\$14,537	\$17,819	\$3,282
Damage Failure	\$9,816	\$3,044	(\$6,772)
<i>Subtotal Non-Discretionary</i>	<i>\$24,353</i>	<i>\$20,864</i>	<i>(\$3,489)</i>
Asset Condition	\$19,591	\$25,141	\$5,550
Non-Infrastructure	\$277	\$1,216	\$939
System Capacity & Performance	\$21,679	\$25,599	\$3,920
<i>Subtotal Discretionary</i>	<i>\$41,547</i>	<i>\$51,956</i>	<i>\$10,409</i>
Total Capital Investment in Systems	\$65,900	\$72,820	\$6,920

* () denotes an underspend for the period

Attachment B

US Electricity Distribution - Rhode Island Plant Additions by Spending Rationale FY 2015 (\$000)

	FY 2015 Total		
	Forecast	Actual in Service	Variance
Customer Request/Public Requirement	\$14,574	\$18,443	\$3,869
Damage Failure	\$10,921	\$3,804	(\$7,117)
<i>Subtotal Non-Discretionary</i>	<i>\$25,495</i>	<i>\$22,247</i>	<i>(\$3,248)</i>
Asset Condition	\$20,153	\$28,094	\$7,941
Non- Infrastructure	\$277	\$346	\$69
System Capacity & Performance	\$23,013	\$25,970	\$2,957
<i>Subtotal Discretionary</i>	<i>\$43,443</i>	<i>\$54,410</i>	<i>\$10,967</i>
Total Capital Investment in Systems	\$68,938	\$76,657	\$7,719

* () denotes an underspend for the period

Attachment C

**US Electricity Distribution - Rhode Island
O&M Vegetation Management
Expenditures
FY 2015
(\$000)**

	FY 2015 Total		
	Budget	Actual Spend	Variance
Cycle Pruning (Base)	\$4,475	\$5,220	\$745
Hazard Tree	\$1,000	\$801	(\$199)
Sub-T (on & off road)	\$316	\$234	(\$82)
Police/Flagman Details	\$650	\$628	(\$22)
Core Crew (all other activities)	\$1,285	\$1,128	(\$157)
Total Vegetation Management	\$7,726	\$8,011	\$285

	FY 2015 Total		
	Goal	Complete	% Completed
Distribution Mileage Trimming	1,168	1,168	100%

* () denotes an underspend for the period

Attachment D

**US Electricity Distribution - Rhode Island
Inspection and Maintenance Program Progress Update
FY 2015
(\$000)**

	FY 2015 Total		
	Budget	Actual Spend	% Completed
Opex Related to Capex	\$1,811	\$1,221	67%
Repair & Inspections Related Costs	\$934	\$794	85%
Long Range Plan	\$250	\$11	4%
Total Operation & Maintenance Expense	\$2,995	\$2,026	68%

	FY 2015 Total		
	Goal	Complete	% Completed
RI Distribution Overhead Structures Inspected	56,542	56,542	100%

Attachment E

US Electricity Distribution - Rhode Island Project Variance Report FY 2015 (\$000)

Project Description	Project Funding Numbers	FY 2015 Total			FY 2015 Variance Cause
		Budget	Actuals	Variance	
Eldred Substation Projects	CD00648, CD00659	\$794	\$1,804	\$1,010	Increased spend on project.
I-195 Contracts 14, 15 - Providence	CD00766, CD00135	\$255	\$1,463	\$1,208	Increased spend on project.
Clarke Street Substation Upgrades	C046831, C046832	\$646	\$934	\$288	Project delays into FY 2016. Overall project costs increased in FY 2015
New Highland Drive Substation	CD00972, CD00978	\$3,344	\$6,096	\$2,752	Increased spend on project.
Volt/Var Pilot	C046352, C052708, C053111	\$1,200	\$2,015	\$815	Increased spend on project.
Pontiac Substation Flood Restoration	CD01242, CD01243	\$1,275	\$1,789	\$514	Increased spend on project.
Langworthy Substation	C036230, C036232	\$97	\$452	\$355	Project Accelerated.
South Street Substation Replacement	C051212, C051213	\$200	\$106	(\$94)	Project delayed into future years
Governor Street Providence Ductline	C023852	\$50	\$1,161	\$1,111	Project delays from FY 2014 into FY 2015. Overall project spend increased in FY 2015.
Kilvert Street #87 Upgrades	C036522, C036516	\$2,308	\$1,432	(\$876)	Project delayed into future years.
New London Ave Substation	C028920, C028921	\$2,300	\$857	(\$1,443)	Project delayed into future years.
Aquidneck Island	C015158, C028628, C024159, CD00649, CD00656, C054054, CD00651, CD00652	\$2,140	\$1,054	(\$1,086)	Project delayed into future years.
Johnston Substation Expansion	C033535, C034002, C028884, C036072	\$1,861	\$2,641	\$780	Project Accelerated.
Chase Hill Substation	C024176, C024175	\$6,056	\$468	(\$5,588)	Project delayed into future years. Overall project cost decreased during FY 2015.
Totals:		\$22,526	\$22,272	(\$218)	

* () denotes an underspend for the period